

## **Remarks**

### **A. Introduction**

Claims 1-14 remain pending in the application, with the Examiner having withdrawn all prior rejections of these claims. However, rather than allowing the claims--as she agreed to do during the recent interview--the Examiner has issued new rejections, now contending claims 1-6, 8-9, and 14 are anticipated by U.S. Patent No. 3,680,555 to Warncke, claim 7 is obvious over the disclosure of the Warncke patent, and claims 10-13 are obvious over combined disclosures of the Warncke patent and U.S. Patent No. 5,769,388 to Welker. Applicants disagree and believe the Examiner has failed to establish a *prima facie* basis for the rejection of any claim. Accordingly, Applicants request that claims 1-14 be allowed without further action.

### **B. The Claims**

Recited in independent claim 1 is a valve assembly for a respirator. Included as part of the valve assembly are both a valve body and an *air purge means* comprising

- a *purge inlet* connectable to *an air pressure supply means*;
- a *purge outlet*; and
- an *air deflection means* arranged so that, in use, *air exiting the purge outlet and incident the air deflection means provides a curtain of air over the valve mechanism* so as to inhibit exhaled and ambient air from flowing into the respirator.

As indicated in the claim, this air purge means is configured “so that *the curtain of air is continuous when the purge inlet is connected to the air pressure supply means* and the air pressure supply means is activated.”

1. *The Warncke patent does not disclose a purge inlet, a purge outlet, and a curtain of air.*

Contrary to the Examiner's contention, exhalation valve 7 of the Warncke patent discloses **none** of these features of Applicants' invention. Indeed, **nowhere** in the Office Action does the Examiner identify any purge inlet and outlet in valve 7, as no such inlet and outlet exist. Instead, the Examiner impermissibly attempts to define some or all of **space 30** (*i.e.* the area between lid 32 and lower portion 26) of the valve of the Warncke patent as being both a purge air inlet and a purge air outlet and, nonsensically, "a curtain of air" as well. See Office Action at p. 3. Even were the Examiner somehow correct that portions of space 30 function as both purge inlet and outlet, clear is that ***no portion of the space itself constitutes a curtain of purge air.***

2. *The exhalation valve of the Warncke patent is not intended to be connected to an air pressure supply means.*

Moreover, even assuming (but not conceding) space 30 somehow functions as a purge air inlet, equally clear is that space 30 is **not** connectable to any air pressure supply means as recited in claim 1. Similarly, assuming a portion of space 30 somehow also functions as a purge air outlet, air ***exiting*** the space would **not** be incident on the (unnumbered) "upper semicircular valve seat" indicated by the Examiner as constituting an air deflection means. Instead, the only exits are via valve outlet openings 34, which move air ***away*** from the upper semicircular valve seat. Yet furthermore, ***if an air pressure supply means were to be connected (through passage 31) to space 30, pressurized air would feed back to the user of the respirator and***

*impede, if not prevent, exhalation.* This result clearly would be unsatisfactory, underscoring the lack of merit in the Examiner's contentions.

3. *The Warncke patent does not disclose a continuous curtain of air exiting a purge outlet.*

Nor are these many deficiencies in the Warncke patent surprising in any way. Detailed in the Warncke patent is a simple non-return valve. When the wearer of the corresponding respirator exhales, air passes through passage 31 and lifts diaphragm 29 from its seat 27. This lifting permits the exhaled air to transit space 30 through central opening 33 and exit the valve via openings 34. By contrast, when the wearer is not exhaling, diaphragm 29 remains in contact with seat 27.

The Warncke patent thus fails either to teach or to suggest *any* air purge means, as none is needed in the context of that development. The patent likewise fails to contemplate providing *any* separate pressurized air supply to the valve or producing *any* air curtain. Consequently, it additionally fails to suggest that any such curtain of air be provided by air *exiting a purge outlet incident a deflector*. Indeed, no need for a *continuous* curtain of purge air exists in the context of the Warncke patent, as flow through its valve 7 is unidirectional at all times. Using the Examiner's reasoning no continuous curtain of purge air could ever exist, as at all times the flow would be block by either (lower) valve seat 27 or the unnumbered "upper semicircular valve seat" identified by the Examiner.

4. *The Welker patent does not cure any of the many deficiencies of the Warncke patent.*

None of these many deficiencies of the Warncke patent is cured by any disclosure of the Welker patent. Applicants accordingly believe no *prima facie* basis

exists for the Examiner's new rejections and request that all such rejections be withdrawn. Furthermore, consistent with the Examiner's stated intention to allow the claims following the interview, Applicants request that the pending claims be allowed.

**Conclusion**

Applicants request that the Examiner allow claims 1-14 and that a patent containing these claims issue in due course.

Respectfully submitted,



Dean W. Russell  
Reg. No. 33,452  
Attorney for the Assignee

OF COUNSEL:

Kilpatrick Stockton LLP  
1100 Peachtree Street  
Suite 2800  
Atlanta, Georgia 30309  
(404) 815-6528